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Sex-based differences in income and response to proposed financial incentives among general practitioners in France

William B. Weeks[a,b,*], Alain Paraponaris[b], Bruno Ventelou[b]

[a] The Dartmouth Institute for Health Policy and Clinical Practice, Lebanon, NH 03766, United States
[b] The Aix-Marseille School of Economics, Marseille, France

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ABSTRACT

Women represent a growing proportion of the physician workforce, worldwide. Therefore, for the purposes of workforce planning, it is increasingly important to understand differences in how male and female physicians work and might respond to financial incentives. A recent survey allowed us to determine whether sex-based differences in either physician income or responses to a hypothetical increase in reimbursement exist among French General Practitioners (GPs). Our analysis of 828 male and 244 female GPs' responses showed that females earned 35% less per year from medical practice than their male counterparts. After adjusting for the fact that female GPs had practiced medicine fewer years, worked 11% fewer hours per year, and spent more time with each consultation, female GPs earned 11,194€, or 20.6%, less per year (95% CI: 7085€–15,302€ less per year). Male GPs were more likely than female GPs to indicate that they would work fewer hours if consultation fees were to be increased. Our findings suggest that, as the feminization of medicine increases, the need to address gender-based income disparities increases and the tools that French policymakers use to regulate the physician supply might need to change.

1. Introduction

Women represent an increasing proportion of the physician workforce in America [1] and Europe [2]. In France, women represented more than 40% of physician workforce in 2007, a figure expected to reach 50% by 2022 [3], driven in part by women entering general practice at a higher rate than they are entering specialty practice [4]. Although the size of the female physician workforce is growing, the number of patients that females can manage may be increasing at a slower rate, for several reasons: females are less likely than their male counterparts to work excessive hours or to work past the typical age of retirement [5], female physicians experience higher levels of work-related distress [6] and 'burnout' [7] that may shorten their work-lives, and females may subordinate their careers when family incomes are high [8]. These factors suggest that the available physician workforce may be relatively limited as a result of the 'feminization of medicine' [5]. Therefore, to plan for an adequate physician workforce, it becomes increasingly important to understand how much women work in comparison to men (this influences the quantity of healthcare supply) and how male and female physicians respond to financial incentives (which may influence how this supply might be rapidly expanded, at least briefly).

To help understand these issues, we first sought to determine whether gender based income differences in France were congruous with those in other countries. In the US, female primary care physicians earn about 10% less than their male counterparts after adjusting for physician and practice characteristics [9,10]. In the EU, female English general physicians earn 11% less per hour [11],

* Corresponding author at: 35 Centerra Parkway, Room 3066, Lebanon, NH 03766, United States. Tel.: +1 603 208 8963.
E-mail address: wbw@dartmouth.edu (W.B. Weeks).

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female Austrian general physicians earn between 7% and 20% less per year [12], female Norwegian physicians earn 16% less per year [13], and, in 2005, female French general physicians earned 17% less per year than their male counterparts, although that difference varied by age group [14]. Second, we wanted to explore whether female physicians might respond differently than their male counterparts to a hypothesized increase in the reimbursement per consultation that is set by the French public authority. While others have explored the relationship between fee increases and work patterns, findings are mixed. Thornton found that male self-employed physicians were relatively unresponsive to changes in marginal hourly earnings [15], but Clerc et al. found that, among French General Practitioners, increased fees are associated with longer consultation lengths [16] which, according to Fortin et al., might be associated with higher 'quality' of care [17]. To date, an exploration of whether female physicians might respond differently than their male counterparts to financial incentives has not been conducted. A recent survey of French general practitioners gave us an opportunity to explore both questions and to consider workforce implications of any differences that we found.

2. Methods

We used results from a telephone survey of 1901 GPs in five French regions: Basse–Normandie, Bourgogne, Bretagne, Pays de Loire and Provence-Alpes-Côte d'Azur. Conducted in March, 2007, the survey examined the characteristics of GPs and their practices. The panel of GPs was compiled from a joint initiative of the French Ministry of Health, the National Federation of the Regional Health Observatories (FNORS) and the Regional Unions of Self-employed Doctors (URML) in the regions considered. The survey was conducted on a randomly selected stratified sample of the panel with the strata defined by gender, practice location, and age (in three categories: under 45, 45–54 and 54 and older). This methodology had been demonstrated to provide a sample of GPs within a region that is representative of the GPs in that region [18–20].

Data collected from GPs included demographics, work hours, year of graduation from medical school, number of weeks of vacation taken in the prior year, whether their fees are fixed (Secteur I) or not (Secteur II), family income, and proportion of that income generated from the practice of medicine in 2006. The survey also asked respondents whether they practiced in a solo or a group practice, whether they ever accepted additional revenues directly from patients (beyond the standard reimbursement of 22€ per consultation in 2007), and whether they would ever provide free services (such as follow up phone calls or examination of follow up lab results) without charging for another consultation. The survey asked whether respondents participated in a Professional Practice Assessment (L'Evaluation des Pratiques Professionnelles, a type of performance review of physician practice). Finally, the survey asked respondents whether they were living with another person as a couple, whether they had children younger or older than age 16 living at home, and the number of such children.

Annual income from the practice of medicine was estimated from answers to two questions. First, respondents could provide their annual family income either directly (about 25% did this) or by selecting an income range; for these, we used the midpoint of the range to estimate annual income. In addition, respondents provided the proportion of their family income that was generated through their practice of medicine. To calculate an estimate of a respondent's annual income attributable to the practice of medicine, we multiplied the family income estimate by the proportion of family income attributable to medical practice.

The survey linked respondents to data obtained from the Individual Receipt for Activity and Prescribing (RIAP), an administrative document generated by France's Social Security Administration that records all reimbursed healthcare spending and gives the precise computations of the activities of each GP. From the RIAP, we were able to calculate the total number of office-based, home-based, and total consultations completed by survey respondents in 2006.

The survey also queried respondents about how they might change their practice patterns – either by changing overall work hours or changing time spent per consultation – in response to a hypothetical increase in the standard consultation fee. Because GP's fees are fixed by the National Health Insurance Fund and rarely change, the survey used a 'stated preference' design to test how respondents might respond to a hypothetical fee increase [21]. The survey randomly assigned respondents to answer whether and how respondents would change their work effort in response to an increase in the standard fee of 5%, 10%, or 20%. In particular, the survey asked respondents whether they would change their weekly work effort (not at all, work more, or work less) and whether they would change the amount of time that they spent with each patient (not at all, spend more time, or spend less time). This study was approved by Dartmouth's Committee for the Protection of Human Subjects and was determined to be exempt from further review (CPHS #23790).

2.1. Sample

Fig. 1 shows how we derived our sample. From the 1901 respondents, we excluded 47 respondents who were not eligible for the survey, 6 male respondents who were planning to either stop practicing or to move out of the region, 4 men and 1 woman who exclusively practiced complementary or alternative medicine, and 106 males and 22 females who worked exclusively in Secteur II (a special billing sector, with GPs who can deviate from the regulated fee). We excluded 237 male and 152 female respondents who did not provide any income information, 12 men and 8 women who did not provide the proportion of their family income that was attributable to their practice of medicine, 17 men and 8 women who reported that they took 11 or more weeks of vacation, and 165 men and 44 women who reported working less than 20 h per week or more than 80 h per week. Therefore, we were able to use data from 828 men and 244 women to examine sex-based income differences. Because 13 men and 8 women did not answer